

AMENDMENTS TO THE CLAIMS:

1. (currently amended) An address translation device comprising:

an extraction unit extracting, from data received via a first network, a fixed identifier indicating a transmission source of the data;

a storage unit storing the fixed identifier and an address, in a second network, of the transmission source indicated by the fixed identifier by relating the fixed identifier and the address to each other;

a reading unit reading the address, in the second network, stored on the storage unit and related to the fixed identifier and extracted by the extraction unit;

a replacing unit replacing ~~the a source address of the data with the address~~ in the second network read by the reading unit ~~with the source address of the data~~;

an identifier extraction unit extracting a variable address of a terminal device connected to the first network and the fixed identifier, from the data received via the first network;

an identifier storage unit storing the variable address and the fixed identifier extracted by the identifier extraction unit by relating the variable address and the fixed identifier;

a variable address acquisition unit acquiring, from the storage unit and the identifier storage unit, the variable address corresponding to a destination address of the data addressed to the terminal device, which contains, as a destination address, the address in the second network received via the second network; and

an adding unit adding the variable address acquired by the variable address acquisition unit, as the destination address of the received data, ~~and adding the fixed identifier related with the variable address stored by the identifier storage unit, to the received data,~~

wherein the received data, which had the variable address added by the adding unit,

contains the fixed identifier related with the variable address stored by the identifier storage unit.

2. (cancelled)

3. (currently amended) A packet translation device, interposed between an IPv6 (Internet Protocol version 6) network and an IPv4 (Internet Protocol version 4) network, for mutually translating an IPv4 packet and an IPv6 packet, comprising:

an extraction unit extracting, from the IPv6 packet, a fixed identifier indicating a transmission source of the IPv6 packet;

a storage unit storing the fixed identifier and an IPv4 address assigned to the transmission source by relating the fixed identifier and an IPv4 address to each other;

a reading unit reading the IPv4 address stored on the storage unit and related to the fixed identifier extracted by the extraction unit;

a packet translating unit translating the IPv6 packet into the IPv4 packet with the IPv4 address read by the reading unit being set as a source address;

an identifier receiving unit receiving data containing a care-of address of an IPv6 terminal device and the fixed identifier indicating the IPv6 terminal device;

an identifier storage unit storing the care-of address and the fixed identifier that have been received by the identifier receiving unit by relating ~~to~~ the care-of address and the fixed identifier to each other; and

a care-of address acquisition unit acquiring the care-of address corresponding to a destination address of the received IPv4 packet from the storage unit and from the identifier storage unit,

wherein the packet translating unit translates the IPv4 packet into an IPv6 packet with the care-of address acquired by the care-of address acquisition unit being set as a destination

address, and the IPv6 packet, which is translated by the packet translating unit, contains ~~with the~~ fixed identifier related ~~to~~ with the care-of address stored by the identifier storage unit.

4. (cancelled)

5. (previously presented) A packet translation device according to claim 3, wherein the fixed identifier is a home address of the IPv6 terminal device.

6. (previously presented) A packet translation device according to claim 3, wherein the storage unit further stores a port number by relating the port number, the address and the fixed identifier each other, and

wherein the reading unit reads the IPv4 address and the source port number stored on the storage unit and related to the fixed identifier extracted by the extraction unit.

7. (original) A packet translation device according to claim 6, wherein the care-of address acquisition unit acquires, from the storage unit and the identifier storage unit, a care-of address corresponding to the destination address and the destination port number of the IPv4 packet received.

8. (Currently Amended) A packet translation system comprising:

a packet translation device, interposed between an IPv6 (Internet Protocol version 6) network and an IPv4 (Internet Protocol version 4) network, for mutually translating an IPv4 packet and an IPv6 packet, comprising:

an extraction unit extracting, from the IPv6 packet, a fixed identifier indicating a transmission source of the IPv6 packet;

a storage unit storing the fixed identifier and an IPv4 address assigned to the transmission source by relating the fixed identifier and an IPv4 address to each other;

a reading unit reading the IPv4 address stored on the storage unit and related to the fixed

identifier extracted by the extraction unit;

a packet translating unit translating the IPv6 packet into the IPv4 packet with the IPv4 address read by the reading unit being set as a source address;

an identifier receiving unit receiving data containing a care-of address of an IPv6 terminal device and the fixed identifier indicating the IPv6 terminal device;

an identifier storage unit storing the care-of address and the fixed identifier that have been received by the identifier receiving unit by relating the care-of address and the fixed identifier to each other; and

a care-of address acquisition unit acquiring the care-of address corresponding to a destination address of the received IPv4 packet from the storage unit and the identifier storage unit,

wherein the packet translating unit translates the IPv4 packet into an IPv6 packet with the care-of address acquired by the care-of address acquisition unit being set as a destination address, and the IPv6 packet which is translated by the packet translating unit contains the fixed identifier related to the care-of address stored by the identifier storage unit;

an IPv6 terminal device transmitting, to a home agent set in the device itself, a registration message containing a care-of address and a home address that are assigned to the device itself; and

a home agent forwarding, upon receiving the registration message from the IPv6 terminal device, the received registration message to the packet translation device.

9. (Currently Amended) A packet translation system comprising:

a packet translation device, interposed between an IPv6 (Internet Protocol version 6) network and an IPv4 (Internet Protocol version 4) network, for mutually translating an IPv4

packet and an IPv6 packet, comprising:

an extraction unit extracting, from the IPv6 packet, a fixed identifier indicating a transmission source of the IPv6 packet;

a storage unit storing the fixed identifier and an IPv4 address assigned to the transmission source by relating the fixed identifier and an IPv4 address to each other;

a reading unit reading the IPv4 address stored on the storage unit related to the fixed identifier extracted by the extraction unit;

a packet translating unit translating the IPv6 packet into the IPv4 packet with the IPv4 address read by the reading unit being set as a source address;

an identifier receiving unit receiving data containing a care-of address of an IPv6 terminal device and the fixed identifier indicating the IPv6 terminal device;

an identifier storage unit storing the care-of address and the fixed identifier that have been received by the identifier receiving unit by relating the care-of address and the fixed identifier to each other; and

a care-of address acquisition unit acquiring the care-of address corresponding to a destination address of the received IPv4 packet from the storage unit and the identifier storage unit,

wherein the packet translating unit translates the IPv4 packet into an IPv6 packet with the care-of address acquired by the care-of address acquisition unit being set as a destination address, and the IPv6 packet which is translated by the packet translating unit contains the fixed identifier related to the care-of address stored by the identifier storage unit; and

an IPv6 terminal device for transmitting, to the packet translation device set in the device itself, a registration message containing a care-of address and a home address that are assigned to the device itself.